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10/075,150	02/14/2002	Harri Pekonen	04770.00040	6898

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WASHINGTON, DC 20001

EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 04/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/075,150

Applicant(s)

PEKONEN, HARRI

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Oath/Declaration***

1. Applicant has provided a residence address in the Oath/Declaration filed April 5, 2002, however, has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required.

### ***Specification***

2. The disclosure is objected to because of the following informalities: the specification relies on information pertaining to the European Standards EN 301192 and EN 300468 as well as IETF RFC 1112 in order to describe the invention (e.g., see page 9, par. 47 regarding “an encapsulator in accordance with ... EN 301192”; page 11, par. 53-55 regarding “descriptor in accordance with EN 300468”, “datagram section in accordance with EN 301192” and “coding ... in accordance with EN 301192”; and page 14, par. 64 regarding “IP to MAC mapping as described in IETF RFC 1112”), however, such documents are not provided with the instant application and the Examiner was unable to obtain a copy of these documents. Accordingly, Applicant is invited to provide a copy of these documents, e.g. in the form of an Information Disclosure Statement, in order for the Examiner to attain full understanding of the instant application.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,477,382 to Mansfield et al.

Regarding claims 1, 14, 24, 30, 38 and 43, Mansfield teaches a digital broadcasting communications system (FIGS. 1-3) that transmits and receives bursts of packets which include time-slice information (e.g., header 1015 comprising next page pointer 1010, e.g. see col. 3, line 36 – col. 4, line 50 and FIG. 10A). Mansfield teaches at a transmitter system (network 302, see FIG. 3) encapsulating information received from an information service provider (packet data services PDS service provider 102, 103) to form a packet header (1015) that contains time-slice information including a time-slice parameter (e.g., slot pointer field 1010; e.g., see col. 19, lines 51-67) specifying a relationship between a current packet of a current burst of packets and a subsequent burst of packets, wherein encapsulation is performed by the collective structure of systems 355, 380 and 361-365 (see FIG. 3) which provide functions of route calculation, fragmentation, re-assembly, and congestion mitigation functions (e.g., see col. 7, lines 8-19). Mansfield further teaches at a receiving system (MES 305) receiving and decoding the time-slice information thereby extracting information that specifies a relationship between a current packet of a current burst of packets and a subsequent burst of packets (e.g., see col. 10, lines 24-36).

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While Mansfield may not specifically disclose a buffer for receiving the information at the transmitting system and a buffer for receiving the time-slice information at the receiving system, Mansfield suggests that such buffering is performed in the communications system by disclosing certain "buffer capacity" considerations (e.g., see col. 16, lines 48-55). Furthermore, Mansfield teaches determining when a next message is to be sent (e.g., see col. 12, lines 9-34) and uses an example of up to 128 frames which may elapse until the next message is sent which suggests that buffering is performed to store the messages prior to reaching the scheduled sending time frame. Additionally, Mansfield teaches at both the transmitting and the receiving systems, comparing, for example, the message number of the ARQ field of a received message with that of a previously received message to determine whether to ignore the message (see col. 20, lines 8-39) which suggests that buffering is performed at both the transmitting and receiving systems. Still further, buffering is well known in the art of packet burst transmissions in multiple access communications systems. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to use a buffer for receiving the information at the transmitting system and a buffer for receiving the time-slice information at the receiving system as suggested by Mansfield by disclosing that there are certain "buffer capacity" considerations, and by teaching storing the messages prior to reaching the scheduled sending time frame and by teaching comparing elements of a received message with those of a previously received message.

Regarding claims 2, 7, 20, 25, 31, 39, 44 and 48, Mansfield further teaches the time-slice information specifies an amount of time that elapses between transmissions of the current packet and transmission of a first transmission packet of the subsequent burst of packets (e.g., see col. 4, lines 11-15 and specifically line 14; also see col. 18, lines 25-35). Further, regarding claim 7, the

amount of time in a slot of Mansfield inherently includes any transmitter-idle time between transmission bursts.

Regarding claims 3 and 34, the time-slice information (header 1015 comprising next page pointer 1010) of Mansfield specifies a duration for transmitting the current burst of packets, wherein the duration for transmitting the current burst of packets is determining using the number of time frames denoted by the time-slice information multiplied by the time frame length.

Regarding claims 4 and 32, Mansfield further teaches the header (1015) includes an index (CU field 1009 indicating slot utilization) for numbering originally transmitted bursts of packets (e.g., see col. 19, lines 48-50 and FIG. 10A).

Regarding claim 5, Mansfield teaches determining as far as eight possible paging intervals in advance (e.g., see col. 4, lines 22-25), and thus, anticipates a buffer substantially large enough to store at least two full bursts of data from the information service provider (PDS 102, 103) and any data to be transmitted between transmission of the two full bursts of data.

Regarding claim 6, Mansfield teaches the amount of time that elapses between transmitting the current packet and transmitting the first-transmitted packet of the subsequent burst is determined based at least in part upon how many packets will be transmitted between transmitting the current packet and transmitting the subsequent packet (e.g., see col. 3, line 66 – col. 4, line 25).

Regarding claim 8, while Mansfield does not disclose a specific buffer type is utilized, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize a buffer which is selected among the group of buffers commonly-used in multiple access

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communications systems, consisting of an elastic buffer, a FIFO buffer, a ring buffer, and a dual buffer.

Regarding claims 9, 21, 27, 35, 40, 45 and 49, Mansfield teaches time-slice information (1010) is placed into lower layer protocol packet header bits (see FIGS. 4 and 9, and col. 9, line 46 – col. 10, line 51).

Regarding claims 10, 22, 28, 36, 41, 46 and 50, while Mansfield does not specifically disclose the lower layer protocol is DVB DSM-CC, such a protocol is known in the art to provide digital video broadcast. Furthermore, Mansfield teaches the invention may be used in virtually any type of communication system requiring receiving terminals or other equipment to be paged (see col. 5, lines 16-21). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the DVB DSM-CC section protocol to provide the power conservation technique of Mansfield with a digital video broadcast communications system.

Regarding claims 11, 23, 29, 37, 42, 47 and 51, Mansfield teaches the time-slice information is placed into at least one byte reserved but not used for media access control addressing (e.g., see col. 9, line 46 – col. 10, line 51, and FIGS. 4, 9 and 10A).

Regarding claims 12, 15 and 17, while Mansfield may not specifically disclose indexes of decreasing or increasing order, such indexes are well known in the art of transmitting packet bursts and thus would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding claims 13, 16 and 18, while Mansfield may not specifically disclose first or last-transmitted-packet indications, it is well known within the art of packet burst transmission to

include indications of a first or last packet within the burst and thus would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding claims 19, 26 and 33, Mansfield teaches a message number sub-field in ARQ 1011 which indicates whether the subsequent burst of packets is an original or a copy burst; wherein if the message number is the same as the previously received message the message is determined to be a copy, otherwise the message is determined to be an original (see col. 20, lines 8-39, specifically lines 23-26 and 32-33).

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,371,734 to Fischer discloses a medium access protocol for a wireless network with power conservation means,

U.S. Patent No. 6,175,557 to Diachina et al. discloses a layer-2 protocol in a cellular communication system,

U.S. Patent No. 6,262,990 to Ejiri discloses a multiplexer of universal data having buffer monitoring and corresponding timing information packetized with transmitted data, and

U.S. Patent No. 6,339,713 to Hansson et al. discloses a method of decreasing power consumption of mobile terminals by decreasing the monitoring of multiple access channel downlinks.



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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott



March 28, 2003



**HUY D. VU**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**